



CLEAN LABEL CONFERENCE

Sophisticated Solutions for Simplified Labels

October 29-30, 2013 • Hyatt Lodge, Oak Brook, Illinois, USA

2013 Technology Snapshot Presentation

**Expeller Pressed Spice
& Herb Extracts
By: Kalsec**

Expeller Pressed Spice & Herb Extracts



Products, Service and Science you can trust... naturally.™

Clean Labels Conference

October 29, 2013

Oak Brook, IL

Howard Haley

Research Fellow

- Kalsec® Products
- Expeller Pressed Spice and Herb Extracts
 - Process Overview
 - Benefits
 - Ingredient Statements
 - Applications

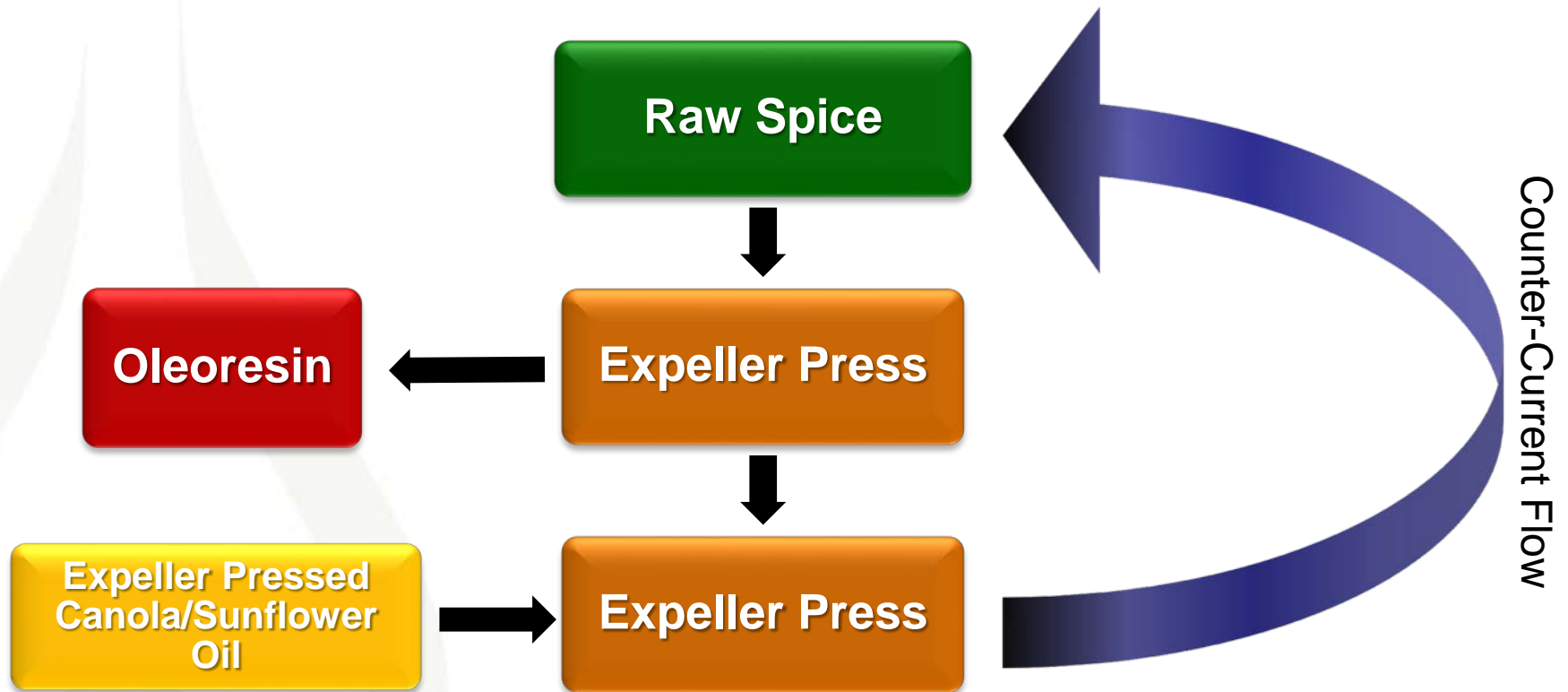


- **Natural Spice and Herb Flavor Extracts**
 - The industry leader in the extraction of the highest quality natural herbs, spices and vegetables that are backed with unparalleled customer service and technical expertise to deliver standardized performance and consistent flavor.
- **Natural Colors**
 - The source for natural yellow, orange, pink, red and green food and beverage hues derived from fruits and vegetables with standardized performance, relevant product forms, reliable supply, technical support and value based pricing.
- **Natural Antioxidants**
 - The market leader for natural antioxidants with standardized performance, relevant product forms, reliable supply, technical support and value-based pricing.
- **Encapsulated Products**
 - E2™ Encapsulated Extracts are ideal for delivering flavor profiles that can be challenging to handle, including: Mustard, Black Pepper, Horseradish, Capsicum, and Wasabi
- **Nutritional Ingredients**
 - Providing the food and dietary supplement industries with natural extractives from spices, herbs and vegetables; including ZeaGold® Natural Zeaxanthin, Alpha Carotene and Capsaicin Concentrate
- **Hop Extracts**
 - Kalsec® specializes in providing the brewing industry with advanced hop extracts for bittering addition, light stability, foam enhancement, and improved economics. HopRival® natural hop extracts are available to provide flavor and aroma that rival traditional hopping.

- Allspice
- Annatto
- Anise
- Basil
- Bay
- Black Pepper
- Capsicum
- Cardamom
- Carrot
- Caraway
- Celery
- Chipotle
- Cilantro
- Chive
- Cinnamon
- Clove
- Coriander
- Cumin
- Dill
- Fennel
- Fenugreek
- Garlic
- Ginger
- Green Ginger
- Green Onion
- Jalapeno
- Kaffir Lime
- Leek
- Lemon
- Lemongrass
- Mace
- Marjoram
- Mint
- Mustard
- Nutmeg
- Onion
- Orange
- Oregano
- Paprika
- Rosemary
- Sage
- Shallot
- Szechuan
- Tarragon
- Thyme
- Turmeric
- White Pepper

Expeller Press Flow Diagram

A patented, non-solvent, high pressure, counter-current extraction process



- Patented Non-Solvent Extraction Process
- Impactful Color & Flavor Profiles
- US Manufactured
- Organic Compliant
- Whole Foods Compliant
- Lower Cost CO₂ Alternative
- Consumer-Friendly Label
 - Expeller Pressed “Name of Spice”

*Kalsec products and their methods of manufacture are patented in the US and in other international jurisdictions.

Ingredient Statements

- Natural Flavor (Spice extractives), canola oil
- Expeller Pressed Celery
- Paprika Oleoresin

Ingredients: ENRICHED MACARONI PRODUCT (WHEAT FLOUR, NIACIN, FERROUS SULFATE [IRON], THIAMIN MONONITRATE [VITAMIN B1], RIBOFLAVIN [VITAMIN B2], FOLIC ACID); CHEESE SAUCE (WHEY, PASTEURIZED PART-SKIM MILK, MILK PROTEIN CONCENTRATE, WHEY PROTEIN CONCENTRATE, MALTODEXTRIN, SODIUM PHOSPHATE, MILK, SALT, CONTAINS LESS THAN 2% OF CANOLA OIL, LACTIC ACID, SODIUM ALGINATE, SORBIC ACID AS A PRESERVATIVE, ARTIFICIAL COLOR, MILKFAT, CHEESE CULTURE, OLEORESIN PAPRIKA [COLOR], NATURAL FLAVOR, ANNATTO [COLOR], VITAMIN A PALMITATE, ENZYMES). CONTAINS: WHEAT, MILK.

INGREDIENTS: POTATOES, POTATO STARCH, BROWN RICE FLOUR, SOYBEAN AND/OR CANOLA OIL WITH TBHQ FOR FRESHNESS, WHOLE GRAIN YELLOW CORN MEAL, OAT FIBER, WHEY, CONTAINS TWO PERCENT OR LESS OF SALT, PALM OIL, CHEDDAR CHEESE (MILK, CHEESE CULTURES, SALT, ENZYMES), MONOGLYCERIDES, MALTODEXTRIN, CULTURED BUTTERMILK, NATURAL FLAVORS, SOUR CREAM (CREAM, NONFAT MILK, CULTURES), LACTIC ACID, ONION POWDER, DEXTROSE, CITRIC ACID, CULTURED NONFAT MILK, YEAST EXTRACT, BUTTER (CREAM, SALT), PAPRIKA EXTRACT FOR COLOR, GARLIC POWDER, DISODIUM GUANYLATE, TURMERIC EXTRACT FOR COLOR, WHOLE WHEAT FLOUR, SOY FLOUR, DISODIUM INOSINATE, ANNATTO EXTRACT FOR COLOR.

Expeller Pressed Spice and Herb Extracts

- Anise
- Capsicum
- Celery
- Chipotle
- Cumin
- Jalapeno
- Mace
- Paprika



- Bakery
- Dairy
- Dressings
- Prepared Meals
- Processed Meats
- Sauces
- Snacks
- Soups



- For more information about how Kalsec® natural spice and herb flavor extracts, natural colors and natural antioxidants can be used to create cleaner labels, please visit www.cleanerlabels.com.